

Declass Review by NGA.

NPIC/D-61-65
19 APR 1965

MEMORANDUM FOR: Assistant Deputy Director (Intelligence)

SUBJECT : Research and Development Project Approval Request for
a Non-Reversible Recording Feasibility Study

REFERENCE : DDCI Memorandum ER 63-88121 dated 23 December 1963,
Approval of Research and Development Activities

In compliance with paragraph 5.b. of the reference, it is requested
that the continuation of the non-reversible recording feasibility study
now on Contract [] T.O. 93 with [] as out-
lined in attachment "A" be approved. The estimated cost of this project

[]

[]

ARTHUR C. LUNDAHL

Director

National Photographic Interpretation Center

APPROVED:

151 Pul
[]
Assistant Deputy Director
(Intelligence)

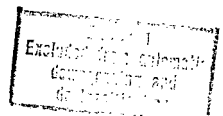
21 April 65
Date

Attachment: "A"

Distribution

Orig & 2 - LB/SS
1 - A/DDI
1 - D/NPIC
1 - P&DS

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Revision

R & D CATALOG FORM		DATE
1. PROJECT TITLE/CODE NAME Non-Reversal Recording Feasibility Study		26 March 1965
2. SHORT PROJECT DESCRIPTION Continuation of a study directed toward producing a non-silver photographic duplicating material to replace conventional wet silver-halide systems.		
3. CONTRACTOR NAME		4. LOCATION OF CONTRACTOR
5. CLASS OF CONTRACTOR Manufacturer		
6. TYPE OF CONTRACT CPFF		
7. FUNDS FY 19 \$	8. REQUISITION NO. NA	9. BUDGET PROJECT NO. NP-S-18
FY 1965	10. EFFECTIVE CONTRACT DATE (Begin - end) June 1965 - June 1966	11. SECURITY CLASS. A.A. - Confidential T.W. --- Unclassified
FY 1966	12. RESPONSIBLE DIRECTORATE/OFFICE/PROJECT OFFICER TELEPHONE EXTENSION DDI/NPIC/P&DS/	
13. REQUIREMENT/AUTHORITY Required as a dry, immediate-readout photographic medium to replace the cumbersome, time-consuming, conventional silver processes.		
14. TYPE OF WORK TO BE DONE Applied Research.		
15. CATEGORIES OF EFFORT		
MAJOR CATEGORY Special Techniques & Studies		SUB-CATEGORIES Film, (Black and White)
16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC. Program requires monthly reports and a final report.		
17. SUPPORTING OR RELATED CONTRACTS (Agency & Other)/COORDINATION Project coordinated with Army, Navy, AF, and DOD.		
18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT (Continue on additional page if required) This is a continuation of an effort to produce a completely dry, black and white, continuous-tone photographic system that overcomes the recognized objectionable features of conventional silver-halide systems. Continuation of this program is predicated on substantial results being achieved prior to June 1965. The process currently under study is a thermoplastic, dielectric, phototropic, polymer system containing components in molecular form capable of forming a colored dye image by electro-chemical reaction when exposed to light and rapid heat. (Contd)		
19. APPROVED BY AND DATE		
OFFICE	DEPUTY DIRECTOR	DDCI

R & D CATALOG FORM (Continued)

18. Continuous-tone prints have been produced by this process, however, the method of stabilization has not yet been entirely successful and the speed (light sensitivity) has been too low. The present effort has been concentrated on determining the molecular characteristics of known dye structures and the nature of their electro-chemical reactions. From this knowledge it is planned to synthesize dye molecules meeting specific system parameters.

The nature of the program is such that little can be realized without further pursuit of the objectives. The program should be continued at the same level for another year.

Specific Objectives are as follows:

1. Black films with $D_{\max} = 3$ will have been achieved. These will have been bleached to an optical density of about 0.1 over most of the spectrum. A quantitative estimate of the probability of achieving $D_{\min} = 0.05$ over the visible spectral region will be made.
2. Resolution of greater than 400 line pairs/mm will have been demonstrated, and techniques for maintaining it will have been developed.
3. Sensitivity of a black film in the region $S_p = 0.01$ to 0.1 will have been demonstrated, and the probability of achievement of $S_p = 0.1$ evaluated.
4. A good knowledge of the photographic properties of the film will be available, and useful operating parameters will have been defined.

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NPIC PROJECT NO: 65

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CLASSIFICATION

RECEIPT OCB/OS

DISSEMINATED OCB/OS

SUPPORT/SERVICE REQUIREMENT

(The following info is required when rqmts are levied by external organizations)

OFFICE _____ DATE OF RQMT _____ CONTROL NO. _____

NPIC DIV/DETACH PROCESSING RQMT _____ PROJ OFF _____ PHONE _____

SUPPORT REQUESTED OF _____ PRIORITY _____ DATE REQUIRED _____

(The following info is required when rqmts are levied for internal support)

DIV/STAFF _____ P&DS _____ DATE OF RQMT 10 FEB '65 _____ CONTROL NO. _____

SUPPORT REQUESTED OF _____ P&DS _____ PROJ OFF _____

25X1

PRIORITY _____ DATE REQUIRED 30 September 1966

1. BACKGROUND INFORMATION:

- The work requested is in support of a departmental: ☐ Photo interpretation proj.;
☐ Non-photo interpretation project. It will result in: ☐ Hard copy report;
☐ Informal report (memo); ☒ Basic service only.

Project Description: Nonreversal Recording Feasibility Study

2. SPECIFIC SUPPORT/SERVICE REQUESTED: Support from NPIC will probably consist of:

- ☐ Photographic; ☐ Reproduction; ☐ Mensuration; ☐ Graphics; ☐ ADP; ☐ Editing;
☒ Other (explain below) -- (Include statement as to estimated amount of work required
of support component(s); i.e., number of contact prints, enlargements, boards, etc.)

~~XXXXXXXXXX~~

1. Solicit and evaluate proposal.
2. Recommend action
3. Monitor contract
4. Prepare final report.

25X1

3. URGENCY JUSTIFICATION: (If immediate support is required a statement of justification must be made on this form.)

DATE OF COMPLETION _____

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CLASSIFICATION

NPIC FM 218 (1-6-65)